

Science, Technology & Innovation Studies
Vol. 5, 2009
ISSN: 1861-3675

STI
Studies
www.sti-studies.de

Mediating online DNA-Dialogues

From public engagement to interventionist research

**Maud Radstake, Annemiek Nelis, Eefje van den Heuvel-Vromans,
Koen Dortmans** (Radboud University, Nijmegen, The Netherlands)

received 10 January 2009, received in revised form 15 May 2009, accepted 20 June 2009

Abstract

In a pilot project called *The DNA-Dialogues* online discussion boards of popular magazines featured as sites for public dialogue on genomics-related issues. As organizers and mediators of those online discussions, we experienced problems that have hardly been attended to by dialogue practitioners nor by social scientists who study and criticize public engagement activities. We illustrate those problems with examples from an online discussion on the storage and use of neonatal screening blood. We draw two lessons. First, practitioners as well as analysts tend to consider dialogues as public engagement activities, whereas we learned that the engagement of experts is just as difficult and equally crucial. Second, the role played by organizers and moderators of dialogue events is often left implicit, whereas we actively contributed to framing the issue at stake in the discussion. As an alternative for the notion of dialogue as a form of public engagement, we propose to 'do dialogue' as a form of interventionist social science research. We instigate an outline of what such interventionist dialogue research would involve, and argue that it requires an integration of the roles of dialogue practitioner and critical analyst.¹

¹ This article is the result of a project of the Centre for Society and Genomics in the Netherlands (at Radboud University in Nijmegen), funded by the Netherlands Genomics Initiative.

1 Introduction

"Why did you think involving parents in this discussion could mean anything?"

This question was pos(t)ed on the online discussion board of the Dutch website *Ouders Online* (Parents Online).² It addressed the initiator of the discussion, who published an article with the title "What should happen with the heel prick blood?" in the online magazine of the website (Radstake 2007). The initiator was a staff member of the Centre for Society and Genomics (CSG), who had attended an expert workshop with medical scientists favouring the extension of existing limits for storing blood collected for the neonatal screening programme, to use it for research. The article discussed the rationale behind such an extension as well as potential issues of privacy, information and consent. The readers of the article and other visitors of the *Ouders Online* website could react on the online discussion board of the website. The scientists in question were invited to participate in the discussion as well.

The writer of the online article is also the first author of the article that you are presently reading. She initiated the online discussion for the CSG as part of a pilot project for public engagement with genomics-related issues.³ *The DNA-Dialogues*, as the pilot was called, ran for a year in 2006-2007 and resulted in four real-life discussion meetings in collaboration with various societal groups, and three online discussions in collaboration with popular printed and online magazines. Besides those events, its outcome has included research projects that are currently carried out at the CSG.

² *Ouders Online* <www.ouders.nl> is a much-frequented Dutch website with an online magazine and a discussion board with around 30.000 new messages each month, on a large variety of topics from pregnancy and birth to educational matters and medical issues, with a lot of exchange of personal experiences and online friendships. All quotes have been translated from Dutch.

³ The pilot project was carried out and evaluated by Maud Radstake in collaboration with Huib de Vriend, LIS Consult, the Netherlands (Vriend & Radstake 2007).

The objective of those PhD projects is to develop an alternative way of doing what is commonly called 'public dialogue' or more generally 'public engagement with science'.⁴

In this article we use one of the online discussions from the pilot as a case to present and analyse the kind of experiences that urged for a more thorough approach. Although the pilot was set up as a communication project rather than as a research project, in hindsight it can be considered as a probe for such an alternative approach. The potential contribution to existing literature and practices of public engagement is twofold. First, we experienced that the increasingly popular notion of 'dialogue' in public engagement has largely focused on the engagement of publics, and neglected the engagement of scientists and experts that is at least a crucial. Second, existing accounts of public dialogue pay little attention to the work done by organizers and moderators in framing and shaping discussions and events. We go beyond a plea to take more notice of that role – we argue that 'doing dialogue' is a form of interventionist and (quasi-)experimental social science.

1.1 Dialogue and public engagement

Dialogue has become a buzzword in research and policy reports on science and society (House of Lords Select Committee on Science and Technology 2000; Parliamentary Office of Science and Technology 2001; European Commission 2002; Council for Science and Technology 2005). Many 'dialogue events' have been developed to engage the public with science and inform policy processes, including consultations, stakeholder dialogues, citizens' juries,

⁴ Eefje van den Heuvel-Vromans currently organizes and studies online discussions in a PhD project supervised by Maud Radstake and Annemiek Nelis at the Centre for Society and Genomics. In another CSG PhD project, Koen Dortmans organizes and studies real-life discussions in debating centres, under supervision of Annemiek Nelis.

consensus conferences and also internet dialogues (Rowe and Frewer 2005; Davies et al. 2009). Dialogue has found its way into mainstream discourses of public engagement with science. It has been presented as an alternative to the deficit model that has long been dominant in science-society communication, offering a two- or even multi-way mode of communication with science and society as mutual informants. What dialogue means, however, is anything but self-evident. The indistinctness of the term concerns the objectives as well as the methods of dialogue.

The term dialogue has been used for participatory events that aim to inform policy as well as for meetings that do not directly seek to do so (Davies et al. 2009). Several authors have questioned the ways in which publics, experts and issues have been framed in policy-oriented events (Barnes et al. 2003; Irwin 2006; Wynne 2006; Kerr et al. 2007; Lezaun and Soneryd 2007). Events that have no direct connection to policy-making, like our *DNA-Dialogues*, have hardly received any attention by critical social scientists, because they do not even claim to have any direct transformative effects on relations between science, society, and policy. Rather than to policy-making, however, such events contribute to learning processes by participating citizens and scientists. Such individual learning processes are often considered to be an essential part of “a gradual step by step change in science and society” (Davies et al. 2009: 341).

Reflexivity by scientists about the social impact and implications of their research is considered to be a condition for a socially robust development of science and technology. The same applies to the consciousness of publics about the ways in which science and technology affect their lives (Nowotny 2003; Felt and Fochler 2008). Raising such reflexivity and consciousness has been the rationale behind many dialogue events, including the *DNA-Dialogues*. Dialogue events do not straightforwardly result in socially robust genomics development, but a suc-

cessful dialogue event may be a ‘stepping stone’ to subsequent more substantive interactions between expert and public participants.

Means to assess or to improve the quality of a dialogue that intends to contribute to a step by step change (rather than to policy) are hard to design or even imagine. Following up on critical literature on public engagement, we decided to go ahead in an exploratory mode.

1.2 The DNA-Dialogues

In the autumn of 2006, the Centre for Society and Genomics started *The DNA-Dialogues* as a pilot project to invite publics to interact with experts on genomics-related issues. The pilot lasted one year. During this year we initiated a series of real life discussion meetings with civil society groups (including women’s organizations, and a Lions Club department) and a number of online discussions that took place on discussion boards of Dutch popular magazines. The *publics* that we intended to involve were groups and individuals who were (potentially) affected by genomics-related research and technology. We actively invited experts to participate in real-life as well as in online events. As *experts* we identified those who are involved in the development or professional use of genomics research or technology, or in policy-making for such development and use.

In the pilot we opted for a practical solution to heed a central critique on public engagement, which is that public engagement usually departs from experts’ framing of the issue under discussion (Wynne 2007). For *The DNA-Dialogues* we would not invite publics to engage in discussions on techno-scientific issues, but stimulate experts to engage in discussions on public issues related to genomics research and governance. That is why we selected popular online discussion boards as a site for dialogue.

Online discussion boards are sites where many people meet spontaneously to discuss issues that interest

or affect them. They are accessible at any time of the day. People can take as much time to write a message as they want, and they cannot be interrupted. Messages can be posted anonymously and can be read by anyone with access to the internet. After registration, anyone can post a message, but the editors of a board can remove messages that conflict with their rules.⁵ This article is about the online part of the pilot and will use one of the online discussions to illustrate our experiences.

The DNA-Dialogues were initially not set-up as a pilot for a research project, but as an experiment in public engagement. During and after the pilot, we came to realize its potential as an object and instrument of social-scientific research, as we will show later. Yet in the pilot project we ourselves first and foremost acted as dialogue practitioners. We identified potential issues and publics and we initiated, organized, moderated, and evaluated online discussions on discussion boards of popular magazines. More concretely, we contacted editors, (co-) wrote introductory articles, invited experts to take part, asked editors to open a discussion thread, stimulated experts to participate, and posted messages ourselves when necessary.

In the next section, we present some experiences from the online discussion on the storage and use of blood from neonatal screening for research on the website of *Ouders Online*, with which we started this paper. That discussion constitutes the main empirical background for our argument. Our analysis and reflections, however, have also been informed by our experiences in two other online discussions that were

part of the pilot,⁶ and an additional online discussion that was organized in the spring of 2008 by one of our students (Jeucken 2008; Radstake et al. 2009).

2 A case story: What should happen with the heel prick blood?

In the spring of 2007 we initiated a discussion on the website *Ouders Online*. The starting point for this dialogue was an invitational expert workshop that one of us had attended. During the workshop scientific and policy experts discussed the question whether blood obtained in the neonatal screening programme (by means of the 'heel prick'), which is currently stored for five years in the Netherlands, could be stored for longer, if possible indefinitely. Scientists would like to extend the limit of anonymous storage, since, as they see it, at present a lot of valid epidemiological data is destroyed. They also argued for extended possibilities to combine data. However, they anticipated societal resistance because of privacy issues and foresaw problems with informed consent. They were looking for ways to address such issues. Furthermore, they wanted to enrich the discussion with the idea that blood donation fosters solidarity between individuals and generations and that medical use of this blood would be for the 'common good'. When the CSG offered to organize an online discussion on the topic, this was cordially accepted.

The editors of *Ouders Online* also reacted positively when we approached them with the idea to initiate a discussion on the issue. We wrote a short article for the online magazine (Radstake 2007), discussing the scientific arguments for longer storage and neces-

⁵ When we set up the online discussions in the pilot, we were not aware of the quite extensive literature about online discussion boards, mainly in the field of communication sciences (Jankowski and Selm 2000; Graham and Witschge 2003; Stromer-Galley 2007). Such literature will be included in the design and analysis of the discussions that are set up as part of our current experimental research projects.

⁶ A discussion on genes and childhood obesity was also organized on the discussion board of *Ouders Online*, in the Autumn of 2006. On the discussion board of a popular Dutch women's magazine (VIVA), we organized a discussion on medical applications of genetics and genomics, in particular testing, in January 2007.

sary changes in accompanying policies of informed consent or opting out, as well as privacy concerns, solidarity and the common good of medicine. The article invited readers to voice their opinion on the online web forum in a discussion with the title *What should happen with the heel prick blood?*. We invited all scientists and policy makers who participated in the expert workshop, to take part in the discussion. Five of the about twenty invited experts responded positively: they expressed the intention to follow the discussion and contribute to it. In our correspondence with them, we stressed that we aimed for dialogue and explained that we expected them to not merely provide information, but to engage in an actual exchange with the regular forum participants.

The number of parents⁷ that participated in the discussion was rather low for the standards of *Ouders Online*. Only 13 parents participated and three others: one scientist who participated in the expert workshop, a member of an NGO known for its critical stance towards human genetics and bio-banking (invited by the CSG) and the CSG staff member who had attended the workshop and who organized the discussion.⁸ The whole discussion contained 45 messages.

Initially the article and the questions in the opening message evoked diverse reactions from the participating parents: some people did not see any problem whatsoever, others emphasized the importance of complete and timely information, whereas others fiercely opposed the whole endeavour because they feared their privacy would be violated, in particular when commercial firms, insurance companies or particular government bodies would get access to the data and information.

2.1 Framing the issue

Like most experts who attended the initial expert workshop, the public health

professor who participated in the online discussion, considered ethical issues such as privacy and the need for informed consent as the most important topics for a societal discussion on blood storage and use. However, some parents resisted the expert's framing of the issue. In a response to one of the professor's messages, one of them wrote:

"I have the impression that you are somehow stuck in your own frame. For the benefit of a proper dialogue, I would very much like to open your frame to another perspective."

And:

"It is all about commitment. You need everyone to want what you want. To achieve that, it does not help to repeat over and over again what it is that you want. Listening, and I mean really good listening to what citizens say about it, is far more important."

Although the writer of this message expressed the strongest views, some other parents also indicated that they were not merely concerned about privacy (as the experts had anticipated) nor about the relevance of heel prick storage for their personal situation (as we as organizers had anticipated). According to them, the expert's framing of the issue in ethical and regulatory terms was too narrow. They rather were worried about the possible commercial and political (mis-)use of stored blood. In her messages, however, the professor continued to explain the scientific and societal urgency of longer storage and the need for policy changes. She did not deny the importance or the relevance of the issues raised by the parents, but she did not explicitly relate them to her own professional agenda and the responsibility of scientists, as the quoted parent urged her to do. In personal communication after the discussion, the professor expressed to us as organizers her appreciation for the discussion, because it had pointed out that the worries of the public should be taken into account when designing education and information.

⁷ We use 'parents' to refer to the uninvited visitors of the *Ouders Online* website.

⁸ Maud Radstake.

By contrast, another professor and workshop participant let us know that the course of the discussion made him decide to refrain from participation. He had initially been interested to provide information to young or prospective parents with serious questions and concerns. He had been put off, however, by what he considered to be the abundance of misapprehensions, fears, irrationalities and frustrations expressed in the actual discussion.

What the two opposite reactions by those experts have in common, is their framing of the relevant issues in terms of regulation and information. What is more, in both cases this framing did not change in the discussion with parents. The course of the discussion merely endorsed it and confirmed the accompanying notion by the experts of their own role as that of an information provider. The same goes for the way in which some parents framed the issue at stake. The responses by the professor, for example, did not make the quoted critical parent reconsider her premises.

Since neither the experts' nor the parents' initial framing of the issue at stake was substantially affected, the discussion did not become a dialogue. Actually, the discussion on the storage of neonatal blood made us who organized *The DNA-Dialogues* reconsider our largely implicit notion of dialogue. The idea of dialogue as a potential contribution to a 'step by step change' in genomics and society became more articulate, as well as our role in the performance of dialogue.

As initiators and mediators we did not merely bring publics and experts together. We were actively engaged in framing work by selecting the topic and site, writing the introductory article and inviting and introducing experts in the discussion. However, that did not result in a collective framing of the issues at stake by those who are affected by a particular science-related development or technology (the publics), and those who take decisions that may affect that development (the experts). When such

a collective effort does not take place, dialogue has failed. What prevented the discussion on the neonatal screening blood from becoming a dialogue?

2.2 Engaging publics and experts

Like other dialogue events, *The DNA-Dialogues* were conceived as a public engagement activity. Critics have noted that public engagement in science tends to embody a static notion of the general public that marginalizes possible counter-publics (Barnes et al. 2003) and usually distinguishes publics from stakeholders (Lezaun and Soneryd 2007; Martin 2008). In most public engagement exercises disinterested citizens or laypersons are invited to engage in a discussion on the social or ethical implications of a particular techno-scientific development. By contrast, our notion of the public participating in *The DNA-Dialogues* was loosely built on a pragmatist idea of publics forming around issues (Marres 2007; Dijkstelbloem 2008), with the public being "all those who are affected by the indirect consequences of transactions to such an extent that it is deemed necessary to have those consequences systematically cared for" (Dewey 1927). Engaging the public in a pragmatist sense is not a matter of getting disinterested citizens interested in science or technology, but of 'making public' a particular techno-scientific development. People will be engaged when they recognize the development as something that possibly affects them.

A public can form around an issue that is different from what is considered to be relevant by experts and public engagement practitioners. This is what happened in the discussion on neonatal blood storage. The public health professor viewed the discussion as diagnostic instrument to find out what are the particular worries and misconceptions of members of the general public who could be affected by changes in the existing policies for the storage of neonatal screening data. The topic of neonatal blood storage, however, also evoked

another public of parents who were affected as citizens by possible political and commercial use of the data. Using existing sites for public discussion rather than creating new ones, as we did in *The DNA-Dialogues*, reflected this pragmatist notion of the public.

Despite the claim of mutual interaction implied by the notion of 'dialogue', assessment of the impact of interactive public engagement events is usually (implicitly or explicitly) limited to either the outcomes for policy, or the effects on the participating citizens. Very little attention has been given to how participating scientists and other experts are affected by such events. Some academic projects and articles have identified this omission (Jackson et al.2005; Burchell 2007) but those have not addressed the implications of their exploratory ideas and findings for the actual organization of dialogue events that do not merely engage publics with science, but also experts with society. If public sites are the venue for interactions between publics and experts, it is the latter who need to be invited and convinced to participate rather than the former. *The DNA-Dialogues*, therefore, presented us with the challenge of *expert engagement*.

Our relatively unarticulated notion of dialogue at the onset of the pilot project was challenged by the difficulties we encountered in engaging experts in online discussions. Only a few experts participated. Moreover, we did not get any indication that their participation actually made experts reconsider their own role, their professional agenda or their societal responsibility. Of course, that does not mean that it did not happen. Learning and reflection are time-consuming processes shaped by many factors. Since we did not follow up on the experts who participated in the pilot, we cannot be sure about the impact.

Others have also experienced that the ideal of dialogue does not easily translate in an actual interaction between publics and experts. An Austrian series of dialogue events with scientists

and laypeople about ethical issues related to genome research, for example, was complicated by mechanisms like the framing of the issues, the public setting of a discussion and participants who emphasize the distinction between facts and values (Felt et al.2009). Similar experiences have resulted in calls to study and evaluate dialogue events in order to identify barriers and opportunities and make changes (Davies et al.2009).

It is clear that merely bringing the public voice to the experts' ears does not establish dialogue. Asking experts to act as discussion partners rather than informants, like we did, is not enough either. Engaging experts involves instructing, briefing and preparing them as well as making them aware of their position, role and biases toward both their own knowledge and that of their (imagined) publics. But the challenge of expert engagement is not only about making experts participate in a discussion or about keeping them on board. It requires an analysis of the ways in which various interactive settings enact particular roles and meanings for experts as well as for publics.

2.3 The mediator at work

The critical parent who challenged the participating professor did not only address this expert, but also called us as discussion organizers to account, asking why we thought that involving parents in the discussion could mean anything.⁹ The parent stated that she did not understand the purpose of this discussion, since present policy for anonymous blood storage and use are clear and the reasons for scientists to challenge this policy are not. Thus she asked us how parents' opinions could make any difference.

In response to those questions, we posted a message explaining the mission of the CSG, which is to contribute to a societal agenda for genomics research by means of (social science and

⁹ See the opening quote of this article.

humanities) research and (public) communication. We stated that:

"That does not mean that we aim at acceptance of that kind of research by 'the public'; we rather consider it to be our duty to inform both researchers and (potentially) involved citizens about what is going on, and allow them to form an opinion about it and let it be heard. One of the ways in which we do that is by bringing scientists into contact with people who are (or might be) affected by (the consequences of) their research."

Presenting ourselves as 'neutral facilitator', however, was rather problematic. Some of the invited experts were genomics scientists who were funded by the Netherlands Genomics Initiative (NGI) that also funds our own organisation, i.e. the CSG. Moreover, the starting point for the discussion had been an expert workshop with a rather obvious purpose, being the extension of limits for the storage and use of blood from neonatal screening for research. Experts supported the idea of an online discussion probably because they hoped that it could take away or counter reasons for potential societal resistance.

Our purpose in organizing a dialogue, however, was to explore whether such resistance would occur, and if so, for what reasons. We intended to create the conditions for the collective articulation of relevant issues by publics and experts. When some dominant parents did not accept the expert's framing of the issues and the expert's framing was not affected by the issues put forward by the parents, dialogue was not realized.

That we were not neutral was also apparent in our response to the critical parent who challenged our position. We combined our role as mediator with taking position:

"I have tried to clarify what I think that (the participating scientist) means, and I will try to get across to her and her colleagues what is the opinion of the public that they so often fear. I think I can do that, because I do understand your arguments and basically I agree with them."

About the scientists we stated:

"Yet I cannot promise that they will listen. Neither can I promise scientists that 'the public' will listen to them, nor is it my duty to convince the public that scientists are right. What I do try to do is make it possible for you to discuss with scientists. (...) That is all I can do."

We already indicated that as organizers we framed the discussion by writing the introductory article and selecting experts as participants. The preceding quotes exemplify how we continued this framing work by responding to parents' questions about the purpose. With our postings we attempted to keep both the expert and the parents on board for the discussion.

2.4 Multiple roles

In this discussion, as well as in other discussions that were part of the pilot, we performed multiple roles. During the workshop and in the introductory article, we presented ourselves as *match-makers*, whose main role was to select and connect parents and scientists, both explicitly and implicitly in many of our actions. When we invited experts to participate, we acted as scientists' *colleagues*, especially when these experts were involved in one of our CSG research projects. We also acted as *experts* ourselves, writing the introductory article for the discussion.

When writing the article and also by means of our interventions in the discussion, we played the part of a *translator* between parents and experts, explaining to both categories of participants what we thought the other side meant. By means of our interventions in the actual discussion, we acted as *mediator* between parents, who attempted to review and widen agendas, as well as experts, who look for ways to confine the discussion to the limits of their expertise. In the previous quotes, we acted as parents' *advocates*, but the critical parent also criticized us for being scientists' advocate.

The multiple roles of dialogue practitioners have received little attention

in public engagement literature. Most critics discuss events that are commissioned by governmental institutions and lump together practitioners and commissioners in their analyses of public engagement activities. Yet our position as initiators, organizers and moderators of the online *DNA-Dialogues* has confronted us with the particular dynamics of that role. Although the multiplicity of our position sometimes confused participants as well as ourselves, we also came to realize that we could use our versatility to gain a better understanding of the factors that impede or stimulate dialogue. On the basis of our own experiences, we propose to integrate the roles of dialogue practitioner and of (critical) social scientist in interventionist dialogue research.

3 Discussion: dialogue as interventionist research

While we started *The DNA-Dialogues* with the idea that online discussions could enable *interactions* between publics and experts, we gradually came to understand and use the fact that such interactions necessarily imply that we as organizers and moderators perform *interventions* (Zuiderent-Jerak and Jensen 2007). The kind of experiences that we have discussed in this paper will sound familiar to many people who have been involved in the organization of public engagement activities. Critics who have analysed the flawed methods and objectives of dialogue events have usually focused on notions of publics rather than on experts. Furthermore, social scientists who study dialogue have generally been distinguished from those who organize and moderate it. Although practitioners may also have a background in the social sciences or humanities, the social scientist as researcher is expected to be *critical*, whereas the practitioners are portrayed as *practical*.

On the basis of our experiences in the *DNA-Dialogues* pilot study, we advocate the combination of those two roles into that of an interventionist dialogue researcher. The role of an interventionist

researcher in public dialogue is different than the role of the organizer and moderator in a public engagement event. An interventionist dialogue researcher invites experts to participate in a public discussion and stimulates as well as studies the articulation of a particular issue that implies specific publics and experts. Merging the roles of (critical) analyst and public dialogue practitioner makes it possible for a social scientist to experience and describe resistances and catalysts for dialogue from the inside. Moreover, it enables the direct input of preliminary research results in the process under study.

Unlike most critical public engagement studies, interventionist research can do more than identify problems, barriers or opportunities for dialogue. It takes seriously the performativity of doing dialogue, actually testing hypotheses about relevant factors and condition by means of experimentation (Felt et al. 2009). Those factors can be connected to participants (including experts and moderators), to the framing of the issue under discussion, to the design and lay-out of the discussion space, and to relations between all those elements.

Doing dialogue as interventionist research rather than public engagement requires a particular set-up that the pilot project described above lacked. *The DNA-Dialogues* involved the initiation, organization and observation of discussions between publics and experts about various issues related to genomics research, applications and governance. When doing dialogue as experimental research, such activities need to be complemented by interviews with participating experts and others concerned before and after the discussion to gain understanding of the trajectories in which discussions are enacted and affect the agendas of participants – or do not.¹⁰

Interventionist public dialogues are experiments in the collective articulation

¹⁰ The PhD projects of Koen Dortmans and Eefje van den Heuvel-Vromans (see footnote 4) have been designed as interventionist dialogue research.

of issues by opening up genomics research and governance agendas, rather than by closing them down with premature definitions, solutions or recommendations (Stirling 2008). The point of such interventions is not to 'design' an issue, but to make connections that enable the collective articulation of an issue by dialogue participants. That is not a neutral position, but a normative one.

In a recent collective experiment in public engagement with the ethical and social dimensions of genome research, Austrian colleagues have analysed the various meanings attributed to 'public participation' by participating publics and experts. They concluded that the meaning of public participation is "inextricably linked to specific assumptions about the science under discussion in its relationship to society, as well as on the processes of its governance and the actors involved in it" (Felt and Fochler 2008: 490). The tensions in the online discussion on the storage of blood from neonatal screening were clearly related to governance issues as well. However, interventionist dialogue research is not about such issues per se. It rather takes an ethnographic approach and follows the actors, which include the participants, the topics under discussion, and us as initiators and moderators. It also traces connections to other issues and discussions, which are actively made or more implicitly performed in the interactions that we study.

The normative stake of the dialogue researcher is not in any particular framing of what is the relevant issue, but in making public the techno-scientific developments considered to be interesting or important by life scientists, and opening them up for the involvement of those who are potentially affected by such developments in discussions about their course and governance. This way, public dialogue experiments can contribute to the incremental change of science and society into a robust relation.

4 Conclusion

In this article we have used our experiences from the pilot project for *The DNA-Dialogues* to show how we came to consider 'public dialogue' as a method of interventionist research rather than as a mode of public engagement. Distinguishing the role of critical analyst from that of practical mediator hinders the mutual benefit that combining and confronting the two in practice promises. If dialogue research and intervention remain distinct, it will be difficult for social science analyses to land in dialogue and public engagement practices. Not merely studying, but also 'doing' dialogue, makes it possible to find frictions that require and allow for intervention. Therefore, we plead for interventionist public dialogue research as a mode of social science research that goes beyond a distinction in terms of 'ironists, reformers or rebels' (Gisler and Schicktanz 2009, this issue).

5 References

- Barnes, Marian/Janet Newman/Andrew Knops/Helen C. Sullivan, 2003: Constituting 'the public' in public participation. In: *Public Administration* 81 Issue 2, 379-399.
- Burchell, K. 2007: Scientific experts and new forms of citizen participation. In: *Science and Democracy Network Workshop*: University of Cambridge.
- Council for Science and Technology, 2005: *Policy through dialogue: Informing policies based on science and technology*, Report.
- Davies, Sarah/Ellen McCallie/Elin Simonsson/Jane L. Lehr/SallyDuensing, 2009: Discussing dialogue: Perspectives on the value of science dialogue events that do not inform policy. In: *Public Understanding of Science* 18(3): 338-353.
- Dewey, J., 1927: *The public and its problems*. New York, Holt.
- Dijstelbloem, H., 2008: *Politiek vernieuwen. Op zoek naar publiek in de technologische samenleving*. Amsterdam, Van Gennep.
- European Commission, 2002: *Science and society action plan*. Luxembourg: Office for official publications of the European communities.

- Felt, Ulrike/M. Fochler, 2008: The bottom-up meanings of the concept of public participation in science and technology. In: *Science and Public Policy* 35, 489-499.
- Felt, Ulrike et al., 2009: Unruly ethics. On the difficulties of a bottom-up approach to ethics in the field of genomics. In: *Public Understanding of Science* 18(3), 354-371.
- Gisler, P./S. Schicktanz, 2009: Ironists, reformers, or rebels? Some reflections on the role of social scientists in the process of science policy making. In: *Science, Technology and Innovation Studies*, this issue.
- Graham, T./T. Witschge, 2003: In search of online deliberation: Towards a new method for examining the quality of online discussions. In: *Communications: The European Journal of Communication Research* 28(2), 173-204.
- House of Lords Select Committee on Science and Technology, 2000: Third report: *Science and society*.
- Irwin, A., 2006: The politics of talk: Coming to terms with the 'new' scientific governance. In: *Social Studies of Science* 36(2), 299-320.
- Jackson, R./F. Barbagallo/H. Haste, 2005: Strengths of public dialogue on science-related issues. In: *Critical Review of International Social and Political Philosophy* 8(3), 349-358.
- Jankowski, N. W./M. v. Selm, 2000: The promise and practice of public debate in cyberspace. In: K. L. Hacker and J. v. Dijk, *Digital democracy. Issues of theory and practice*. London: Sage Publications, 149-165.
- Jeucken, N., 2008: *Met het oog op dialoog. Een kwalitatief interventieonderzoek naar de factoren die een rol spelen bij de totstandkoming van een dialoog tussen ouders en experts in een online discussie over de vroege diagnostiek van autisme*. Masters's thesis. Nijmegen: Radboud University Nijmegen, Centre for Society and Genomics.
- Kerr, A./S. Cunningham-Burley/R. Tutton, 2007: Shifting subject positions: Experts and lay people in public dialogue. In: *Social Studies of Science* 37(3), 385-411.
- Lezaun, J./L. Soneryd 2007: Consulting citizens: Technologies of elicitation and the mobility of publics. In: *Public Understanding of Science* 16(3), 279-297.
- Marres, N., 2007: The issues deserve more credit: Pragmatist contributions to the study of public involvement in controversy. In: *Social Studies of Science* 37(5), 759-780.
- Martin, G. P., 2008: "Ordinary people only": Knowledge, representativeness, and the publics of public participation in health-care. In: *Sociology of Health & Illness* 30(1), 35-54.
- Nowotny, H., 2003: Democratising expertise and socially robust knowledge. In: *Science and Public Policy* 30(3), 151-156.
- Parliamentary Office of Science and Technology 2001: *Open channels: Public dialogue in science and technology*. Report. London: Parliamentary Office of Science and Technology.
- Radstake, M., 2007: Wat moet er gebeuren met het hielprikbloed? In: *Ouders Online*. <www.ouders.nl/mgez2007-hielprik.htm>.
- Radstake, M./E. Heuvel-Vromans/N. van den Jeucken/K. Dortmans, 2009: Societal dialogue needs more than public engagement. In: *EMBO Reports* 10(4), 313-317.
- Rowe, G./L. J. Frewer, 2005: A typology of public engagement mechanisms. In: *Science, Technology & Human Values* 30(2), 251-290.
- Stirling, A., 2008: "Opening up" And "Closing down": Power, participation, and pluralism in the social appraisal of technology. In: *Science, Technology & Human Values* 33(2), 262-294.
- Stromer-Galley, J., 2007: Assessing deliberative quality: A coding scheme. In: *Journal of Public Deliberation* 3(1), 1-35.
- Vriend, H. de/M. Radstake, 2007: *De DNA-Dialogen: evaluatie pilotproject interactie met publieksgroepen over genomics*. Delft: LIS Consult, in cooperation with the Centre for Society and Genomics.
- Wynne, B., 2006: Public engagement as a means of restoring public trust in science – hitting the notes, but missing the music? In: *Community Genetics* 9(3), 211-220.
- Wynne, B., 2007: Public participation in science and technology: Performing and obscuring a political-conceptual category mistake. In: *East Asian Science, Technology and Society: An International Journal* 1(1), 99-110.
- Zuiderent-Jerak, T./C. B. Jensen, 2007: Editorial introduction: Unpacking 'intervention' in science and technology studies. In: *Science as Culture* 16(3), 227-235.